

Listing of Claims

Please amend claims 1, 8, 13, 18-25, 28, 32, 33, 37, 40 as shown below. Please cancel claim 7.

This listing of claims will replace all prior versions of claims and listings of claims in the application:

1. (currently amended) A composite coated wood construction product comprising:

a wood-based substrate; and

a composite layer coating a surface of the wood-based substrate,

wherein the composite layer includes a polymer and an organic filler,

wherein the organic filler is at least one of saw dust, wood flour, wood fibers, by-products of paper manufacturing, and recycled cellulosics.

2. (original) A composite coated wood construction product according to claim 1, wherein the wood construction product is a structural wood construction product.

3. (original) A composite coated wood construction product according to claim 1, wherein the composite layer encapsulates the wood-based substrate.

4. (original) A composite coated wood construction product according to claim 1, wherein the composite layer further includes an inorganic filler.
5. (original) A composite coated wood construction product according to claim 4, wherein the inorganic filler is at least one of talc, calcium, mica, clay, nanocomposite material, and flyash.
6. (original) A composite coated wood construction product according to claim 4, wherein a combination of all inorganic fillers is substantially between 5% and 35% by weight of the composite layer.
7. (cancelled)
8. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the organic filler is an agro-fiber.
9. (original) A composite coated wood construction product according to claim 8, wherein the agro-fiber is one of rice hulls, wheat shaft, flax, sugar cane, peanut shells, kenaf, and coconut shells.

10. (original) A composite coated wood construction product according to claim 1, wherein a combination of all organic fillers is substantially between 20% and 80% by weight of the composite layer.

11. (original) A composite coated wood construction product according to claim 10, wherein the combination of all organic fillers is substantially between 30% and 60% by weight of the composite layer.

12. (original) A composite coated wood construction product according to claim 1, wherein the polymer includes at least one of polyethylene, polypropylene, polystyrene, ABS, polyvinyl chloride, and polyester.

13. (currently amended) A composite coated wood construction product comprising:

a wood-based substrate; and
a composite layer coating a surface of the wood-based
substrate,

wherein the composite layer includes a polymer and an organic filler
according to claim 1, wherein the composite layer is foamed.

14. (original) A composite coated wood construction product according to claim 13, wherein the composite layer includes a chemical blowing agent.

15. (original) A composite coated wood construction product according to claim 13, wherein the composite layer includes a physical blowing agent.
16. (original) A composite coated wood construction product according to claim 13, wherein a foamed composite layer has substantially between 5% and 80% less weight than an unfoamed composite layer with substantially the same volume as the foamed composite layer.
17. (original) A composite coated wood construction product according to claim 16, wherein a foamed composite layer has substantially between 10% and 50% less weight than an unfoamed composite layer with substantially the same volume as the foamed composite layer.
18. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the composite layer includes an additive to increase the strength of the composite coated wood construction product.
19. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the composite layer includes at least one of a crosslinking agent, a compatibilizers, a colorant, and a processing aid.

20. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the polymer includes an interpolymer.
21. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the composite layer further includes a biocide.
22. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the wood-based substrate includes dimensional lumber.
23. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the wood-based substrate includes milled shapes.
24. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the wood-based substrate includes one of solid wood, compressed wood, and particle board.
25. (currently amended) A composite coated wood construction product according to claim 13 4, wherein the wood-based substrate is treated with a protecting agent.

26. (currently amended) A composite coated wood construction product according to claim 13 ~~4~~ further comprises at least one additional layer.
27. (original) A composite coated wood construction product according to claim 26, wherein the at least one additional layer includes an adhesive.
28. (currently amended) A composite coated wood construction product comprising:
 a wood-based substrate;
 a composite layer coating a surface of the wood-based
substrate; and
 at least one additional layer,
wherein the composite layer includes a polymer and an organic filler, and
according to claim 26, wherein the at least one additional layer includes a
coextruded layer.
29. (currently amended) A composite coated wood construction product according to claim 28 ~~26~~, wherein the at least one additional layer is foamed.

30. (original) A composite coated wood construction product according to claim 1, wherein the composite layer is substantially between 0.005 inches and 0.500 inches thick.

31. (original) A composite coated wood construction product according to claim 1, wherein the composite layer is substantially between 0.5 inches and 3.0 inches thick.

32. (currently amended) A composite coated wood construction product comprising:

a wood-based substrate; and
a composite layer coating a surface of the wood-based substrate,

wherein the organic filler is at least one of saw dust, wood flour, wood fibers, by-products of paper manufacturing, and recycled cellulosics, and
wherein the wood construction product has an exterior surface substantially the same as an exterior surface of a non-structural plastic composite.

33. (currently amended) A method of manufacturing a composite coated wood construction product comprising the steps of:

coating a surface of a wood-based substrate with a layer of a composite melt; and

cooling the layer of composite melt; and
foaming the layer of composite melt,
wherein the composite melt includes a polymer and an organic filler.

34. (original) A method according to claim 33, wherein the step of coating further includes extruding the layer of composite melt.

35. (original) A method according to claim 34, wherein extruding the layer of composite melt includes extruding the layer of composite melt using at least one of a single screw extruder, a twin screw extruder, a tandem extruder, and a continuous mixer/extruder combination.

36. (original) A method according to claim 34, wherein the step of coating further includes feeding the composite melt into a first entrance of a cross head die; and feeding the wood-based substrate to a second entrance of the cross head die.

37. (currently amended) A method of manufacturing a composite coated wood construction product comprising the steps of:

coating a surface of a wood-based substrate with a layer of a composite melt;
cooling the layer of composite melt; and

~~according to claim 34 further comprising the step of~~
coextruding an additional layer.

wherein the composite melt includes a polymer and an organic filler.

38. (original) A method according to claim 37, wherein the additional layer is a tie layer between the layer of composite melt and the wood-based substrate.

39. (original) A method according to claim 37, wherein coextruding an additional layer includes foaming the additional layer.

40. (currently amended) A method according to claim 39 33 further comprising the step of foaming the layer of composite melt.

41. (original) A method according to claim 33, wherein coating the surface includes altering a portion of a surface of the composite melt layer to create texture on the surface.